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11
12   UNITED STATES DISTRICT COURT
13   FOR THE NORTHERN DISTRICT OF CALIFORNIA
14   OAKLAND DIVISION
15
16   IN RE: SOCIAL MEDIA ADOLESCENT   MDL No. 3047
     ADDICTION/PERSONAL INJURY PRODUCTS
     LIABILITY LITIGATION   Case No.: 4:22-md-03047-YGR
17
18   This Document Relates To: **DECLARATION OF MANUEL ARROYO**
                                            IN SUPPORT OF META'S POSITION
     ALL ACTIONS   **REGARDING MDL PLAINTIFFS'**
19   **INTERROGATORY NO. 6**
20
                                            Judge: Hon. Yvonne Gonzalez Rogers
21   Magistrate Judge: Hon. Peter H. Kang
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DECLARATION OF MANUEL ARROYO IN SUPPORT OF META'S POSITION REGARDING MDL PLAINTIFFS' INTERROGATORY NO. 6

I, Manuel Arroyo, declare as follows:

1. I am a Data Scientist who works within the Legal Department at Meta Platforms, Inc. ("Meta"). I am part of the team that is responsible for organizing, interpreting, analyzing, and summarizing structured data in order to support certain internal legal teams, outside counsel, and operations teams in connection with legal proceedings. I have personal knowledge of the following facts, or as to matters that are not within my personal knowledge, I have made a reasonable inquiry, and I am informed and believe that those facts are true and correct. If called as a witness, I could and would testify competently thereto.

2. When working with large datasets in the warehouse, Meta data scientists typically use Presto, an industry standard, open-source software suite initially developed by Meta and now publicly used for querying databases. Presto is optimized for working with high-volume data.

3. Presto has a built-in function called approx_percentile, which approximates percentiles in large datasets. Meta uses this function in the ordinary course of business. Meta does not calculate exact percentiles in the ordinary course of business for large datasets because the amount of time to compute exact percentiles is excessive. In fact, Meta's current Presto suite does not even include a built-in function to calculate exact percentiles.
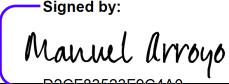
4. The approx_percentile function has a parameter called "accuracy" that specifies the precision of the approximated percentiles. Meta's company-wide default is to use an "accuracy" set at 1.33 percent. The 1.33% error rate means that the percentile identified by the algorithm for each value is guaranteed to be within 1.33% of the exact percentile. For example, for the value that the function returns for the 70th percentile, the exact percentile for that value would fall somewhere between the 67.87th and 71.33rd percentile.

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5.   Meta currently does not have a standard way to calculate exact percentiles for a dataset of this size. As noted above, there is not a built-in function in Meta's Presto suite for this, so Meta would need to come up with a bespoke, untested solution. In addition to the computing time required to calculate exact percentiles on massive datasets, there is significant human time needed to facilitate the calculations, including organizing the data, running the calculations, and exporting the data. This is extremely time-consuming because these calculations involve about 1.1 million percentile data points across approximately 90,000 permutations of platform/state/month/age cohorts. My team has been investigating possible workarounds, and we have identified one possible option. We expect this potential workaround to take at least 6 to 7 weeks to complete. However, this is an untested solution, meaning both the feasibility of using this workaround and the expected time to complete it may change.

6.   It would also be highly burdensome to train one of Plaintiffs' experts on Meta's systems so that they could pull this data themselves. As explained above, this process requires multiple, complex steps using proprietary Meta tools and requiring knowledge of Meta's data environment. It generally takes about 1 month to train a new member of my team to work in Meta's data environment, and 3 or more months for them to be fully comfortable navigating it. Any on-site examination of the data would require the near full-time diversion of a Meta employee's time to train and facilitate this expert's work, meaning any production would likely take even more time.

I declare under penalty of perjury under the law of the State of California that the foregoing is true and correct.

Executed on December 2nd, 2025, in ___Chicago___, Illinois.

Signed by:

Manuel Arroyo

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Manuel Arroyo

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2   DATED: December 2, 2025

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By: /s/ Ashley M. Simonsen

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